

Amendments to Claims

1. (Currently amended) A process for preparing a low color, PVB polyvinyl butyral sheet comprising the steps:

(I) admixing polyvinyl alcohol, butyraldehyde, an acid or mixture of acids, water, and a surfactant;

(II) stabilizing the mixture obtained in step (I) by (a) raising the pH of the mixture to at least pH 10, (b) isolating the PVB polyvinyl butyral resin composition by draining the liquid, and (c) washing the PVB polyvinyl butyral resin composition with neutral pH water;

(III) plasticizing the PVB polyvinyl butyral resin composition with from about 30 to about 50 pph of plasticizer, based on the dry weight of the PVB resin;

(IV) optionally mixing (a) a PVB polyvinyl butyral bleaching compound, and/or and, optionally, (b) an antioxidant and a UV light stabilizer with the PVB polyvinyl butyral resin composition; and

(V) extruding the PVB polyvinyl butyral resin composition at a temperature of from about 175°C to about 225°C to obtain a PVB polyvinyl butyral sheet having a glass transition temperature (T_g) of greater than about 32°C and a YID of less than about 12.

2. (Currently amended) The process of Claim 1 wherein—
~~(a) the resin composition is plasticized with from about 30 to about 50 pph plasticizer; (b) the process comprises the mixing with the resin composition includes an antioxidant and a the UV light stabilizer.~~

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Currently amended) The process of Claim 8 1 wherein the bleaching compound is an organic bisulfite, an inorganic bisulfite, or a ~~sodium dialkyl sulfosuccinate~~.

10. (Currently amended) The process of Claim 9 1 wherein the bleaching compound is ~~DOS~~ sodium dioctyl sulfosuccinate.

11. (Currently amended) The process of Claim 10 26 wherein the ~~PVB~~ polyvinyl butyral is plasticized using a wet process.

12. (Currently amended) The process of Claim 10 26 wherein the ~~PVB~~ polyvinyl butyral is plasticized using a dry process.

13. (Cancelled)

14. (Currently amended) A plasticized ~~PVB~~ polyvinyl butyral sheet composition consisting essentially of: polyvinylbutyral having a hydroxyl (OH) number of from about 15 to about 25; a plasticizer or plasticizer mixture present in an amount of from about 30 pph to about 50 pph, based on the dry weight of the ~~PVB~~ polyvinyl butyral resin; a surfactant; and optionally including either (i) a ~~PVB~~ polyvinyl butyral bleaching compound, or (ii) an antioxidant and an ultraviolet (UV) light stabilizer, or (iii) both (i) and (ii), wherein the sheet has a yellowness index (YID) color of less than 12, and wherein the surfactant is the type that performs the function of a bleaching compound or the polyvinyl butyral bleaching compound is present.

15. (Currently amended) The composition of Claim 14 wherein the plasticizer is ~~360~~ triethylene glycol di(2-ethylhexanoate).

16. (Currently amended) The composition of Claim 15 wherein the plasticizer is present in an amount of from about 30 to about 45 pph, by weight, based on the dry weight of the PVB polyvinyl butyral resin.

17. (Cancelled)

18. (Currently amended) The composition of Claim 17 16 wherein the PVB polyvinyl butyral includes a surfactant, a bleaching compound, an antioxidant, and a UV light stabilizer.

19. (Cancelled)

20. (Currently amended) The composition of Claim 19 15 wherein the surfactant is ~~DOSS~~ sodium dioctyl sulfosuccinate.

21. (Original) The composition of Claim 20 wherein the antioxidant is a bis-phenolic compound.

22. (Original) The composition of Claim 21 wherein the antioxidant is 2,2'-methylenebis(6-t-butyl-4-methylphenol).

23. (Currently amended) A laminate article comprising at least one layer of the PVB polyvinyl butyral composition of Claim 14.

24. (New) A process for preparing a low color, polyvinyl butyral sheet comprising the steps:

- (I) admixing polyvinyl alcohol, butyraldehyde, an acid or mixture of acids, water, and a surfactant which also performs the function of a bleaching compound;
- (II) stabilizing the mixture obtained in step (I) by
 - (a) raising the pH of the mixture to at least pH 10,
 - (b) isolating the resin by draining the

- liquid, and (c) washing the resin with neutral pH water;
- (III) plasticizing the polyvinyl butyral resin composition with from about 30 to about 50 pph of plasticizer, based on the dry weight of the polyvinyl butyral resin;
- (IV) optionally mixing (a) a polyvinyl butyral bleaching compound and/or (b) an antioxidant and a UV light stabilizer, with the polyvinyl butyral resin composition; and
- (V) extruding the polyvinyl butyral resin composition at a temperature of from about 175°C to about 225°C to obtain a polyvinyl butyral sheet having a glass transition temperature (T_g) of greater than about 32°C and a YID of less than about 12.

25. (New) The process of Claim 24 wherein the surfactant is selected from the group consisting of sulfosuccinates.

26. (New) A process for preparing a low color, polyvinyl butyral sheet comprising the steps:

- (I) admixing polyvinyl alcohol, butyraldehyde, an acid or mixture of acids, water, and sodium dialkyl sulfosuccinate;
- (II) stabilizing the mixture obtained in step (I) by (a) raising the pH of the mixture to at least pH 10, (b) isolating the resin by draining the liquid, and (c) washing the resin with neutral pH water;
- (III) plasticizing the polyvinyl butyral resin composition with from about 30 to about 50 pph of plasticizer, based on the dry weight of the polyvinyl butyral resin;
- (IV) optionally mixing (a) a polyvinyl butyral bleaching compound and/or (b) an antioxidant and a UV light stabilizer, with the polyvinyl butyral resin composition; and

(V) extruding the polyvinyl butyral resin composition at a temperature of from about 175°C to about 225°C to obtain a polyvinyl butyral sheet having a glass transition temperature (T_g) of greater than about 32°C and a YID of less than about 12.

27. (New) The process of Claim 26 wherein the sodium dialkyl sulfosuccinate is sodium dioctyl sulfosuccinate.

28. (New) The process of Claim 24 wherein the surfactant is included in amount of from about 0.01 to about 0.85 pph by weight, based on the weight of polyvinyl alcohol.

29. (New) The process of Claim 26 wherein the dialkysulfosuccinate is included in amount of from about 0.01 to about 0.85 pph by weight, based on the weight of polyvinyl alcohol.

30. (New) The process of Claim 27 wherein the sodium dioctyl sulfosuccinate is included in amount of from about 0.01 to about 0.85 pph by weight, based on the weight of polyvinyl alcohol.

31. (New) The process of Claim 24 wherein the surfactant is included in amount of from about 0.10 to about 0.80 pph by weight, based on the weight of polyvinyl alcohol.

32. (New) The process of Claim 26 wherein the sodium dialkyl sulfosuccinate is included in amount of from about 0.10 to about 0.80 pph by weight, based on the weight of polyvinyl alcohol.

33. (New) The process of Claim 27 wherein the sodium dioctyl sulfosuccinate is included in amount of from about 0.10 to about 0.80 pph by weight, based on the weight of polyvinyl alcohol.

34. (New) The process of Claim 24 further comprising the mixing the antioxidant and the UV light stabilizer with the polyvinyl butyral resin composition.

35. (New) The process of Claim 26 further comprising the mixing the antioxidant and the UV light stabilizer with the polyvinyl butyral resin composition.

36. (New) The process of Claim 35 wherein the antioxidant is included in an amount of from about 0.01 to about 0.6%, based on the total weight of the sheet.

37. (New) The process of Claim 36 wherein the antioxidant is a bis-phenolic antioxidant.

38. (New) The process of Claim 36 wherein the antioxidant is present in amount of from about 0.03 to about 0.3%, based on the total weight of the sheet.

39. The process of Claim 38 wherein the antioxidant is a bis-phenolic antioxidant selected from the group consisting of 2,2'-ethylidenebis(4,6-di-t-butylphenol); 4,4'-butylidenebis(2-t-butyl-5-methylphenol); 2,2'-isobutylidenebis(4,6-dimethylphenol); and 2,2'-methylenebis(6-t-butyl-4-methylphenol).

40. (New) The process of Claim 24 wherein the YID is less than about 8.

41. (New) The process of Claim 1 wherein the bleaching compound is a sodium dialkyl sulfosuccinate.

42. (New) The process of Claim 1 wherein the polyvinyl butyral bleaching compound is a compound that reacts directly with color-forming compounds present in a polyvinyl butyral resin composition.

43. (New) The process of Claim 1 wherein the polyvinyl butyral bleaching compound is a compound that is capable of yielding a compound that reacts with color-forming compounds present in a polyvinyl butyral resin composition.

44. (New) The process of Claim 1 wherein the polyvinyl butyral bleaching compound is a compound that decomposes in situ to yield decomposition products that react with color-forming compounds present in a polyvinyl butyral resin composition.

45. (New) The process of Claim 1 wherein the polyvinyl butyral bleaching compound is a compound that inhibits the formation of color-forming compounds present in a polyvinyl butyral resin composition.

46. (New) The process of Claim 1 wherein the polyvinyl butyral bleaching compound is selected from the group consisting of sodium or potassium bisulfite, and tetramethylammonium bisulfite.

47. (New) The process of Claim 1 wherein the polyvinyl butyral bleaching compound is present in an amount of from about 0.01 to about 0.85 parts per hundred, based on the weight of polyvinyl alcohol used in the preparation of the polyvinyl butyral resin composition.

48. (New) The process of Claim 1 wherein the polyvinyl butyral bleaching compound is present in an amount of from about 0.10 to about 0.75 parts per hundred, based on the weight of polyvinyl alcohol used in the preparation of the polyvinyl butyral resin composition.

49. (New) The process of Claim 1 wherein the plasticizer is triethylene glycol di(2-ethylhexanoate).

50. (New) The process of Claim 24 wherein the plasticizer is triethylene glycol di(2-ethylhexanoate).

51. (New) The process of Claim 26 wherein the plasticizer is triethylene glycol di(2-ethylhexanoate).

52. (New) The process of Claim 32 wherein the plasticizer is triethylene glycol di(2-ethylhexanoate) and is present in an amount of from about 30 to about 45 pph, by weight, based on the dry weight of the polyvinyl butyral resin.

53. (New) The process of Claim 52 further comprising the mixing the antioxidant and the UV light stabilizer with the polyvinyl butyral resin composition, wherein the antioxidant is included in an amount of from about 0.01 to about 0.6%, based on the total weight of the sheet, and wherein the antioxidant is a bis-phenolic antioxidant.

54. (New) The process of Claim 24 wherein the admixing is carried out at a temperature of 5 to 100°C.

55. (New) The process of Claim 52 wherein the admixing is carried out at a temperature of about 90°C.

56. (New) A polyvinyl butyral sheet obtained by the process of any of Claims 1, 24, 26 and 52.

57. (New) The composition of Claim 15 wherein the surfactant is a sulfosuccinate.